BULLETIN

OF

THE JOHNS HOPKINS HOSPITAL.

Volume II.—No. 16.] BALTIMORE, SEPTEMBER, 1891. [Price, 15 Cents.

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HOSPITAL STAFF.

Superintendent:
Henry M. Hurd, M. D.

Physician: William Osler, M. D.
Resident Physician: Henry A. Lafleur, M. D.

Assistant Resident Physicians:
D. Meredith Reese, M. D.
August Hoch, M. D.
Charles E. Simon, M. D.
W. S. Thayer, M. D.

Surgeon: William S. Halsted, M. D.
Resident Surgeon: Hardy Phippin, M. D.

Assistant Resident Surgeons:
W. H. Baltzell, M. D.
W. S. Roose, M. D.

Gynecologist and Obstetrician: Howard A. Kelly, M. D.
Resident Gynecologist: Hunter Robb, M. D.

Assistant Resident Gynecologists:
W. W. Farr, M. D.
A. A. Ghriskey, M. D.

Pathologist: William H. Welch, M. D.
Associate in Pathology: W. T. Councilman, M. D.

Assistant in Bacteriology and Hygiene:
Alexander C. Abbott, M. D.

OUT-PATIENT DEPARTMENT.

Chief of the Dispensary:
William S. Halsted, M. D.

1. *Department of General Medicine:* William Osler, M. D.
2. *Department of Diseases of Children:* William Osler, M. D., and W. D. Booker, M. D.
3. *Department of Nervous Diseases:* William Osler, M. D., and H. M. Thomas, M. D.
4. *Department of General Surgery:* W. S. Halsted, M. D., assisted by J. M. T. Finney, M. D.
5. *Department of Genito-Urinary Diseases:* W. S. Halsted, M. D., and James Brown, M. D.
5. *Department of Gynecology:* H. A. Kelly, M. D., assisted by Hunter Robb, M. D.
7. *Department of Ophthalmology and Otology:* S. Theobald, M. D., and R. L. Randolph, M. D.
8. *Department of Laryngology:* John N. Mackenzie, M. D.
9. *Department of Dermatology:* R. B. Morison, M. D.

Miss Isabel A. Hampton, *Superintendent of Nurses and Principal of the Training School.*

L. Winder Emory, *Purveyor.* Miss Rachel A. Bonner, *Matron.*
Stanley Hutchins, *Comptroller of Accounts.*

SUPERINTENDENT'S REPORT
OF THE
JOHNS HOPKINS HOSPITAL,
FOR THE YEAR ENDING JANUARY 31, 1891.

TO THE TRUSTEES OF THE JOHNS HOPKINS HOSPITAL:—

Gentlemen:

It again becomes my duty to present a summary of the operations of this Hospital in all of its departments, for twelve months, or for the period ending January 31st, 1891.

STATISTICS.

At the close of the last hospital year there were under treatment 61 men and 42 women; being a total of 103 persons. During the year there were admitted 927 men and 795 women; a total of 1825 under treatment. There were discharged 902 men and 758 women, leaving under treatment at present 86 men and 79 women; or a total of 165 persons.

Of the whole number discharged, 750 persons were considered well, 494 improved, 45 were unimproved, 220 were not treated, 32 were transferred, and 119 died.

Of the patients remaining at the close of the present year, 86 are men and 79 are women, total 165: 139 are white and 26 are colored. The daily average number under treatment has been 132. The largest number in any one day has been 178; the smallest number has been 103. The total number of days of hospital board and treatment given, has been 48,305. Of the new patients, 711 have been in the Medical Department; 573 have been in the Surgical Department, and 438 have been in the Gynecological Department. The number of operations in the Surgical Department has been 408. The number of operations in the Gynecological Department has been 363. In the Out-Patient Department or Dispensary 14,582 patients have been treated. Of these, 7,187 were men, and 7,395 were women. The number of visits made has been 56,013. The number of prescriptions which have been prepared in the Dispensary has been 36,806. In October last, in order to better systematize the work of the Dispensary, a change of hours was made, which brought General Medicine, General Surgery, Genito-urinary Surgery, Diseases of the Nervous System and Diseases of Children in the morning; and the specialties, Diseases of Women, Diseases of the Throat and Nose, Diseases of the Skin and Diseases of the Eye and Ear, in the afternoon. The effect of this change of hours has been to diminish the attendance of patients in some departments. It is not thought, however, that any permanent diminution in the usefulness of the Dispensary will follow. As soon as the poor become familiar with the new hours there is little doubt that the attendance will grow. Fuller details as to the Medical, Surgical and Gynecological work will be found in the statistical tables which are appended to this report.

MEDICAL STAFF.

The heads of departments continue unchanged, and comparatively few changes have been made in the resident staff.

In April last, Dr. George E. Clarke's term of service as Assistant Resident Surgeon expired, and his position was filled by the appointment of Dr. W. H. Baltzell, of Baltimore. In June, Dr. W. S. Roose, of Washington, was appointed an additional Assistant Resident Surgeon. In October, Dr. F. J. Brockway, who had served as Resident Surgeon since the opening of the Hospital, resigned and Dr. Hardy Phippin of Boston, was appointed in his place. In June, Dr. Charles E. Simon of Baltimore, and Dr. Aug. Hoch of Baltimore, were appointed additional Assistant Resident Physicians. In October, Dr. Harry Toulmin, who had served as an Assistant Resident Physician since the opening of the Hospital, resigned. The duties of Dr. Osler as Physician-in-Chief were performed most satisfactorily during his absence of four months in Europe, by Dr. Henry A. Lafleur, the Resident Physician.

The value and efficiency of the organization of the Hospital into separate departments under competent and permanent heads—an organization which is somewhat unusual in America—have been demonstrated by the experience of another year. This method of administration has secured a uniformity in the work of each department which could not have been attained otherwise, and has promoted the objects of the Hospital.

COURSES OF INSTRUCTION FOR GRADUATES IN MEDICINE.

The work of medical instruction was entered upon by the Hospital with great reluctance and only after it became apparent that the University was not ready to inaugurate it. The feeling in fact was strong among the heads of the different departments that the development of the Hospital would be more symmetrical if medical instruction could be deferred until every portion of the Hospital had been systematically opened and properly appointed for its work. A demand however, was created immediately upon the opening of the wards for instruction for graduates in medicine; and courses were consequently arranged to meet this apparent necessity. It is well understood by all that systematic medical teaching forms no part of the functions of a hospital and all share the hope that this branch of our present work will be relinquished as soon as the Johns Hopkins University enters upon it. In the interests of the Hospital it is most important that arrangements be made to open at the earliest possible date the Medical School of which the Hospital is destined to be an auxilliary. Such a course will relieve the Hospital of a heavy burden of expense and permit the addition of those branches of hospital work which have been planned but which are at present impracticable by reason of other necessary expenditures.

The first courses of medical instruction which had been previously announced by printed circulars, began in January, 1890. They consisted of didactic and clinical lectures, of medical, surgical and gynecological clinics, in the Amphitheatre, and of courses of instruction in the operating rooms,

Hospital wards and Dispensary. The lectures continued for two months; and the courses of clinics, bed-side and dispensary instruction, until May 1st.

In October, similar courses were again resumed. Instruction in Bacteriology and Pathological Histology, has since been given in the Pathological Laboratory, by Dr. W. H. Welch, Dr. W. T. Councilman, and by Dr. A. C. Abbott. In addition to the Laboratory work, Professor Welch began a course of lectures in January, 1891, which will continue weekly for three months on selected subjects in Bacteriology. Professor Councilman will lecture during the same period upon "The Etiology and Pathological Histology of Bright's Disease," and Dr. Abbott will lecture upon "The Historical Development of Bacteriology" and the "Development of Modern Views on Immunity." Professor Osler has conducted courses in practical medicine in the Hospital wards since October 1st. He has also held a weekly clinic in the Amphitheatre, and has participated in the clinical work of the Dispensary. He began in January, 1891, a series of lectures upon the "Valvular Diseases of the Heart," which will extend over January and February. During March he will lecture upon the "Practical Aspects of Cerebral Localization." Dr. H. M. Thomas, began a course of lectures in January, to continue for three months, upon the "Diagnosis of Nervous Diseases.

Professor Halsted has acted as Chief of the Dispensary and has conducted a weekly clinic in the surgical operating room. Beginning with January, he has begun a series of clinical lectures illustrated with cases from the Hospital wards. These lectures will continue for three months. Professor Kelly has continued to give courses in Gynecology and Abdominal Surgery, in his private operating room, in the Dispensary and in the Hospital wards. He has also given a weekly clinic in the Amphitheatre. Beginning with January 1st, he has delivered a weekly lecture upon practical subjects connected with gynecology.

Since December 1st, the Superintendent of the Hospital has given an hour weekly to cases of Mental disease who have applied at the Dispensary. He has also, beginning with January 1st, delivered a weekly lecture in the Amphitheatre, on "Insanity in its Clinical Aspects." These lectures will continue during three months. The course announced last year in the Hygienic Laboratory, was given during March, April and May. It consisted principally of familiar lectures, demonstrations and practical laboratory work. Dr. Billings delivered four lectures on "The Disposal of Sewage," during the month of April. A similar course has been announced for the coming year.

THE NURSES' TRAINING SCHOOL.

The instruction of nurses in the Training School has gone on in a regular systematic manner during the entire year.

In March, 1890, an additional class of eleven persons was accepted from among the probationers. In October, a similar class of eleven was also organized. The courses of lectures which were given in the last Report, were continued until June. During the Summer months, owing to the necessity of providing for vacations and the increased demands made upon the time and energies of pupils by Hospital duties, these lectures were omitted, but resumed again during the month of October. The course for 1890 and 1891, as arranged for Junior and Senior instruction, is as follows:—

JUNIOR LECTURES.

The Hygiene of Apartments.—DR. ABBOTT.

1. Chemistry of the atmosphere.—Biological significance of its different constituents.—Physics of air-currents.
2. Alterations in the air resulting from respiration.—Pollution of the air from inorganic sources.—Floating particles in the air.
3. Diffusion of gases as seen in the so-called "Natural Ventilation."—Application of this phenomenon and artificial methods of ventilation.—Amount of air necessary under different conditions.
4. Ready methods for testing the quality of air.—Improvised ventilation.
5. General hygiene of sick-rooms.—Disinfection of infected clothing.
6. Disinfection and disposal of excreta.—Disinfection of infected apartments.
7. Preservation of food, milk, &c., &c.
8. Demonstration of the system of ventilation and heating employed in the Johns Hopkins Hospital.

Visceral Anatomy with Demonstrations.—Dr. COUNCILMAN.

1. The Thorax. 2. The Abdomen.

Medical Lectures.—Dr. LAFLEUR, Dr. REESE.

1. The general care and observation of patients.
2. The recording of observations of temperature, pulse, and respiration.
3. Nursing in febrile diseases, including the use of cold water bath.
4. Nursing in contagious diseases.
5. Diet.
6. The administration of medicine.
7. Medical appliances and emergencies.

Surgical Lectures.—Dr. PHIPPIN, Dr. FINNEY.

1. Cell life.—Healing of wounds.
2. Principles of aseptic and antiseptic surgery.—Dressings and disinfectants and their methods of preparation and use.
3. Anaesthetics and their administration.—Care of patients before, during and after operation.—Shocks and emergencies.
4. Some special operations.—Surgical diseases, tumors, &c.
5. Hemorrhage and its treatment.—Wounds and their treatment.
6. Fractures, dislocations, contusions and sprains; their diagnosis and treatment.—Prompt aid to the injured.
7. Wounds, accidents, suppuration, abscess, erysipelas, septicaemia, tetanus, etc.
8. Principles of bandaging.

Gynecology.—Dr. ROBB.

1. Special anatomy of the pelvis.—Diseases to which women are liable.
2. Abdominal operations.—Preparation of patient, hands, instruments, etc.—Assistance of nurses at operation.—Asepsis.—How to keep aseptic while on duty.
3. After-care of abdominal cases; vomiting, pain, position of patient, catheterization, changing of dressings, enemata.
4. General gynecological operations; care after operations.—Gynecological instruments.

Diseases of the Eye and Ear.—Dr. THEOBALD.

1. The anatomy of the eye; care in health and disease.
2. Care of eyes after operations.
3. Anatomy of the ear; care in health and disease.

Children—Dr. BOOKER.

1. Care of infants. Condition of the child immediately after birth, (1) general appearance, (2) bony frame work, (3) internal organs, (4) changes in the blood circulation, (5) establishment of pulmonary respiration.

2. Infancy. (1) Growth and development of infants, (2) physiological peculiarities, (3) tendency to disease, (4) great mortality.
3. Care of healthy infants. (1) Handling, (2) bathing, (3) clothing, (4) sleep, (5) exercise, (6) the nursery.
4. Infant-feeding. (1) In health, (2) in sickness.

SENIOR LECTURES.

Obstetrical Lectures.—Dr. KELLY, Dr. ROBB.

1. *Pregnancy.* Organs of the body concerned in pregnancy and in parturition: (*a*) The bony canal, the false and the true pelvis; (*b*) The soft parts, uterus, vagina, and pelvic floor.
2. *Impregnation.* The ovum, its development.—The placenta.—The development of the uterus.—The hygiene of the pregnant state.—The diet.—Care of the bowels.—Care of the breasts.—The vomiting of pregnancy.—The diagnosis of pregnancy.—Quickening, auscultation, etc.—Table of calculation of probable duration of pregnancy.—Death of the foetus in the uterus.
   Abortion. The signs of impending abortion.—Natural course.—Its management.—Incomplete abortion, its results.
3. *Parturition.* Making the bed for the lying-in woman.—The mature foetus.—Conditions of the pelvic organs.—Forces bringing about the birth of the child.—Forces resisting the birth.
4. *Natural Labor.* Antisepsis and asepsis.—Position of foetus, etc.—Stage of labor.—Assistance called for in natural labor.—How the nurse is to conduct herself in an emergency.—Laceration of the perineum.—Post partum hemorrhage.—What the nurse is to do to help the physician.—The birth of the placenta.—Its difficulties, and its management.
5. *The Puerperal State.* What it is and the relation of the nurse towards it.—What preparations must be made for it.—A list of articles which must be on hand.—Receiving the child.—Washing the child.—Dressing the child.—The care of the child.
6. *After-Care.* Care of the mother during the puerperium.—Care of the child during nursing.—Care of bottle-fed children.—Dangers to the mother in the puerperium.—Dangers to the infant.

Special Subjects.—Dr. LAFLEUR, Dr. MACKENZIE, Dr. HURD.

1. Elementary urinalysis.
2. Common poisons with their antidotes.
3. Diseases of the throat.
4. Treatment and nursing of the throat.
5. Diseases of the nose.
6. The care of the nervous and insane.
7. What to do for special forms of insanity.
8. Occupation for the invalid and convalescent.

Dietetics.—Miss BOLAND.

1. Nutrition.—Digestion.—Adaptation of foods to particular needs and conditions.
2. Processes of cooking.—Fire.—Effect of heat on food materials.—Relative merits of different ways of applying heat.—Flavors.
3. Serving.—Neatness.—Temperature of foods.—Selection of dishes and colors.

Contagion.—Dr. WELCH.

Disinfection in contagious diseases.

Diseases of the Skin.—Dr. MORISON.

1. Anatomy and care of the skin. 2. Nursing in diseases of the skin.

Nervous Diseases.—Dr. THOMAS.

Practical applications of electricity.

General Medicine.—Dr. OSLER.

Symptomatology.

Nursing.—Miss HAMPTON.

1. Ethics of nursing.
2. Ward management.
3. Private nursing.
4. District nursing.

Children's Diseases.—Dr. BOOKER.

Diseases of children.

Massage.—Miss HITCHCOCK.

1. History; divisions; in the hands of the masseuse; in the hands of the nurse. Demonstration on hand and arm.
2. Effect on digestion; massage of chest and abdomen.
3. Leg and thigh; resistive movements.
4. Massage of head; soporific effect.
5. Back.
6. Sprains; dislocations; indurations; paralysis; percussions; position; use of oils.

Commencing with the middle of June, the Training School assumed the responsibility of the nursing of sick children at the Thomas Wilson Sanitarium, supplying a head nurse and three pupil nurses. The head nurse remained at the Sanitarium during the entire season, but the pupil nurses were changed at intervals of three weeks.

The work which was done at the Sanitarium commended itself to the trustees and medical officers of that institution. It was also of great importance to the Training School and furnished opportunities to pupil nurses to become familiar with the nursing of sick children; especially of children who were suffering from diseases incident to the summer months.

Miss Hampton continues in charge of the Training School. The organization of additional classes, rendered it necessary to employ Miss Lavinia Dock, a graduate of the *Bellevue Hospital Training School*, as her Assistant. There are at present connected with the nursing staff of the Hospital, six head nurses, one surgical operating-room nurse, one dispensary nurse, one superintendent of the cooking school, and thirty-six pupil nurses.

During the year it became evident that additional facilities were required for teaching pupil nurses the science and art of cooking for the sick. In April last, Miss M. A. Boland, a graduate of the *Boston Cooking School* was appointed to organize a cooking school for this Hospital. A diet kitchen was fitted up for the purpose in connection with the general kitchen of the Hospital.

During the past year, nurses have gone in rotation for periods of instruction of from three weeks to one month, in practical work in the Cooking School.

The following extract from a paper prepared by Miss I. A. Hampton, Superintendent of Nurses, will give a very good idea of the work done:

"The organization of the cooking school resembles that of a ward with its head nurse and pupils, the teacher corresponding to the head nurse. Two pupils are sent to her for a month at a time. Their hours for duty are from 7.30 a. m. to 5.30 p. m. The first hour and a half of the day is spent in the two private wards, where each pupil takes charge of the preparations for breakfast, makes the toast, arranges the trays daintily and gets everything in readiness for the breakfast, which arrives from the general kitchen at eight o'clock. They then serve the trays and leave the wards at 9 a. m. going directly to the cooking school kitchen, which is in a small room conveniently situated and easily accessible to all the wards. There they meet the teacher and the day's instruction begins.

The course includes the general subject of the preparation of beef essences, beef teas, broiled meats, steaks, chops and birds, gruels, porridges, mushes, drinks, jellies, toasts, soups, broths, oysters, eggs, potatoes, custards, sherbets, creams, frozen fruits, cordials, salads, koumiss and all simple dishes, such as baked apples, plain boiled rice, &c., &c. The beef tea, chicken broth and mutton broth for the use of the entire hospital are made each morning and in addition practical demonstrations of the process of making dishes

selected from the above schedule are given by the teacher every forenoon. The method of preparing about 150 different articles of sick diet is taught during the month and each article is made at least three times by the pupils themselves. The greater part of the day's cooking is distributed among the various wards at noon.

The afternoon hours are chiefly devoted to theoretical teaching, which includes for example, talks on the effect of heat on food; the effect of cold; fire; the chemistry of foods; oxygen; the composition of air; water; the cooking of water; the mineral and organic matter in the same; albumen; and methods of serving food. All notes, lectures and recipes are written out in full.

Towards the end of the month a practical test is given of the proficiency of each pupil by requiring her to make as large a number of dishes as possible, without aid from either teacher or notes. An oral examination is given at the end of the course and this is followed at the end of another month by a written test.

The following questions will serve as examples of an oral examination:

1. Why is bread, improperly toasted, unwholesome?
2. What is the chemical composition of an egg?
3. Give some of the best ways for cooking oysters.
4. Upon what does the nutritive value of a diet depend?

The following are examples of a written examination:

1. Write out a rule with reasons for broiling steak.
2. What are the most easily assimilated foods?
3. Illustrate, by several examples, the fact that nutritious, palatable and attractive dishes may be made with inexpensive materials."

I append the Annual Report of the Superintendent of Nurses and Principal of the Training School.

BALTIMORE, *February 9th*, 1891.

DR. H. M. HURD,
Superintendent, Johns Hopkins Hospital:—

Sir:—The following is the yearly report of the Nursing Department from February 1st, 1890, to February 1st, 1891.

Owing to the School still being in a state of organization changes from month to month have of necessity taken place according to the needs of the Hospital. The year began with a staff of 6 head-nurses, 4 graduate night-nurses, and the first class of 18 pupil-nurses.

In March the spring term for applicants opened, and during the months of March, April and May 16 probationers entered and from this number 11 were retained; this formed the second or Junior class of pupils.

A number of changes were made in the staff of head-nurses.

In March Miss Caroline Hampton resigned, and Miss Glenn was appointed operating room nurse. Miss W. Miller was appointed head-nurse of ward G. Miss M. McKechnie to a similar position in ward H. In May Miss Macrae, head-nurse in the surgical wards, left to take charge of the nursing in another hospital, and in July Miss Alice Lyon was appointed in her place. Miss Coogan left May 1st, and July 1st Miss Ada Graham replaced her as head-nurse, ward B. In June Miss Glenn's resignation was accepted, with much regret at losing such a valuable co-worker. During the summer months the operating room work was done by the pupil-nurses and in September, Miss Martha Munn was appointed operating-room nurse. Miss Greenwood, dispensary nurse resigned and Miss Ida Moore replaced her.

April 18th, the cooking school opened under the charge of Miss M. A. Boland. The time arranged at first for the course of instruction was three weeks for each pupil, but has since been increased to one month. 20 pupils have thus far completed the course. For the purpose of securing to the pupils some systematic instruction and practice in the care of children, the nursing at the Thomas Wilson Sanitarium was undertaken June 16th. A head-nurse was put in charge and until its close in September, 12 nurses acted as her assistants remaining for a period of three weeks each.

Classes and lectures were stopped the third week in June and were resumed after the summer vacations October 1st. The last year's course of lectures was revised and divided into two courses, the Senior and Junior. Classes were also divided in the same way. The entire number of classes held during the year was 59; lectures 65.

In September the autumn term opened to applicants and between then and December, 15 probationers entered: of this number 11 were retained as pupils.

On November 1st for the first time since the opening of the Hospital, the entire night-nursing was done by the pupil-nurses under the supervision of Miss Alice Chase, who was appointed night head-nurse. The Senior class received the first year's examination in medical and surgical nursing in September. The surgical examination was conducted by Dr. F. Brockway; the medical by Dr. H. Lafleur. The class average was 89.9, the highest marks taken 96.6, the lowest, 65.

Miss L. L. Dock assumed her duties as assistant superintendent November 1st.

Since October 1st fifteen weeks "special duty" have been done, a special nurse being permitted to the private patients if required, whenever the condition of the wards permitted it.

There has been but one case of prolonged illness among the pupils, a light case of typhoid fever in September. The nurse was permitted to go home to regain her strength and is again on duty.

The number of applications received for Circulars is, - -	320
" " Journal applications received, - - - - -	98
" " " " accepted, - - - - -	36

At various times during the year the School has had the pleasure of entertaining for a short time the superintendents of nurses from the following schools for nurses:—

New York City School.
New York Hospital School.
St. Luke's Hospital School, Chicago.
Illinois School, Chicago.
Toronto General Hospital School, Canada,

and the president and vice-president of the Illinois School, Chicago.

It is with the greatest pleasure that I take this opportunity of expressing my hearty appreciation of the valuable assistance rendered me by the staff of head-nurses in their thoroughness, careful teaching of the pupils, and their loyalty to the School.

We have also been greatly sustained in our work by the co-operation and unfailing courtesy of the Hospital staff.

Very respectfully submitted,

ISABEL A. HAMPTON,
Superintendent of Nurses and
Principal of the Training School.

PUBLICATIONS.

The publications mentioned in the last report have been issued with as much regularity as the circumstances which usually attend the preparation of scientific publications have permitted. The first volume of the *Bulletin* consisting of nine numbers was completed in December last, and the first number of a new volume has already been issued. This publication has attracted considerable attention among medical men, and its reports of the proceedings of societies have done much to present to the medical world the work of the Hospital in its various departments. The publication of the results of scientific research work has also not been neglected.

The following is a partial list of the more important contributions which have been made by the physicians of the Hospital to the *Bulletin:*

"Laveran's Malarial Organisms," "Hysterorrhaphy," "The Causation of Hog Cholera," "Squint and Esophoria cured by Glasses," "Bacteriological Study of Hail," "Amœba Coli in Dysentery and Liver Abscess," "Stomach Washing in Children," "Atypical Epithelial Growths," "Ehrlich's Test in Typhoid Fever," "Salicylic Acid in Dermatology," "Fluorescein in Corneal Lesions," "The Relation of Water Supply to Epidemics," "The remote results of Oöphorectomy," "Typhoid Organisms and Lower Animals," "Sternberg's Treatment of Yellow Fever," "Animal Parasites," "Diplococcus Pneumoniæ," "Electric Apparatus for Diagnosis of Nervous Diseases," "Laceration of the Perineum," etc.

In the last report mention was made of the volume of *Hospital Reports* for 1890—two fasciculi of which have been issued. Two more fasciculi of this volume have also been issued, and of the remainder for the year 1890 one is in the hands of the printer and the remainder are in an active state of preparation. Fasciculi 3 and 4 have been prepared by Dr. Kelly and relate wholly to gynecology.

The following is a list of the titles :—

"Description of the Gynecological Operating Room;" "Table of Fifty Laparatomies;" "Report of Two Autopsies;" "Composite Temperature and Pulse Charts of Forty Abdominal Sections;" "Management of the Drainage Tube in Abdominal Surgery;" "The Gonococcus in Pyosalpinx;" "Tuberculosis of Fallopian Tubes and Peritoneum;" "General Gynecological Operations;" "Urinary Examination in Ninety-One Gynecological Cases;" "Ligature of Trunks of Uterine and Ovarian Veins;" "Carcinoma of Cervix Uteri in the Negress;" "Elephantiasis of Clitoris;" "Myxo-Sarcoma of the Clitoris;" "Kolpo-Ureterotomy;" "Record of Deaths."

The "Description of the Hospital," prepared by Dr. Billings at the request of the Trustees, has also been issued during the year. It is a fine specimen of book-making and has received much praise both in this country and Europe. It contains numerous phototypes and lithographs and many detail drawings. The text gives a full description of the plans and a carefully prepared account of the heating apparatus, the system of ventilation and the system of drainage. The volume is a fitting epitome of the work which has been accomplished in building the Hospital and preparing it for its special work.

Societies.

The Hospital Medical Society has continued in active operation during the past year and the value and variety of the sessions which have been held bi-weekly are well shown by the published reports. A Journal Club has also had regular sessions during the year at which time members of the Resident and Dispensary Staff have presented summaries of current medical literature in every department. In November, a Historical Club was organized to hold monthly meetings for the study of medicine in its historical aspects. These meetings have been well attended and have proven interesting and profitable.

At the Training School for Nurses a Journal Club has been organized for the study of the current literature of nursing and the allied branches of hygiene and medicine.

The Work of the Hospital.

The value of the work done by the Hospital during the past year is not shown alone by the bare results of the ward or dispensary work which has been most gratifying or by the numbers who have received treatment or who have been relieved. The highest work has been that of teaching, which has been done in every department of the Hospital. It is most gratifying to know that the methods employed here in ward work, in dispensary organization, in the surgical and gynecological operating rooms have commended themselves to medical teachers throughout the country and that many of the special appliances of this Hospital have been imitated in other hospitals and operating rooms.

At the time the Hospital was opened, fears were expressed that the Private or Pay wards would be in little demand during the summer. The experience of the past two summers has shown that a constant demand exists for the accommodations which these wards furnish and they have been fairly well occupied by patients. It is also gratifying to be able to report that all the wards of the Hospital have proven extremely comfortable even in sultry weather. This is undoubtedly due to the fact that the buildings are upon an eminence upwards of a hundred feet above tide water and the wards so arranged as to get the full benefit of the prevailing winds during the entire summer. The plat of ground occupied by the various buildings, itself nearly 14 acres in extent, is surrounded by broad streets which increase the amount of open space to full twenty acres. The nights even in June and July have been cool, and patients suffering from serious illness or who were undergoing severe surgical operations have not felt the climate any more severely than they would in any Northern city. The added experience of a year has demonstrated the necessity of the medical, surgical and gynecological work which this Hospital is doing among the poor of Baltimore. The free work has constantly grown in importance and usefulness since the opening of the Hospital and hundreds of poor people have received relief who could not have obtained it otherwise. This work has been done cheerfully and ungrudgingly both among Hospital and Dispensary patients. It is evident, however, that some persons who apply for gratuitous advice and prescriptions in the Dispensary, and free beds in the Hospital are not objects of charity, and should not receive the benefits of the Institution. Although a constant effort has been made to discriminate between the proper objects of the charity of the Hospital and those who ought not to receive it, there is reason to fear that this charity has been abused. This is largely due to the fact that whoever undertakes an investigation of the circumstances of a patient has no ground of information beyond the statements which are made to him by the applicant for relief. Some more thorough system of investigation is needed which will procure accurate and reliable information. At the Massachusetts General Hospital this investigation is made by an officer of the hospital, who visits the homes and makes careful and judicious inquiries there. In some of the New York hospitals the names of all persons applying for relief, when any doubt exists as to the propriety of granting it, are reported to the Charity Organization Society and a systematic investigation is made by an agent of this society. After a careful review of the whole subject I am strongly of the opinion that the time has come when an arrangement should be made with the Charity Organization Society of Baltimore, whereby all suspected cases may receive a prompt investigation. It demoralizes any man to receive as a gift what he is able to pay for wholly or in part. Indiscriminate and hap-hazard charity begets habits of improvidence and of wastefulness, if not of actual vice among its recipients. No poor man, woman

or child ought to suffer for good medical and surgical attention in this city from lack of ability to pay for it. On the other hand, no person should receive such attention as an absolute free gift who is able to pay any portion of the cost of it. I would urge that all applicants for relief at the Dispensary and Hospital be promptly and carefully scrutinized in the interests of both the public and the Hospital. In addition to the evil effect upon the community of indiscriminate charity, there is also danger of doing injustice to the profession of medicine which numbers among its members so many persons actively engaged in charitable work. Neither the Hospital nor Dispensary should interfere with the sources of support of these men by affording free medical or surgical treatment to those who are able to pay for it.

In this connection mention may be made of the excellent provision which exists at this Hospital for the accommodation of private or pay patients—a provision which is not excelled in any general hospital in this country. These patients are accommodated in two buildings, situated on the Broadway front to the right and left respectively of the main entrance. The building on the right is designed for gynecological cases and is divided into two floors with rooms, corridors, verandas, tea-kitchens and service rooms precisely alike upon the two floors. The building on the left is similarly arranged. Upon the upper floor medical and surgical cases of the male sex are received, and upon the lower floor medical and surgical cases of the opposite sex. All the rooms are heated by indirect hot water and also by grates and are ventilated in the most approved manner. Each ward has a tea-kitchen where food is prepared with a steam table, gas range and hot and cold water, a clothing or linen room, and service rooms. These four private wards accommodate about 60 patients.

HEATING AND VENTILATION.

The results attained in these important pre-requisites to the comfort and health of the Hospital have been most gratifying during the past year. The heating apparatus has proved efficient, easily managed and economical in its operation. The ventilation of the wards has also been uniformly good, and the air of the wards has been pure and sweet at all times. The following report from Dr. Abbott will give fuller details as to the practical working of both systems:

REPORT UPON THE HEATING AND VENTILATION OF THE JOHNS HOPKINS HOSPITAL FOR THE YEAR ENDING FEBRUARY 1st, 1891.

By A. C. ABBOTT, M. D.

Assistant in Bacteriology and Hygiene, Johns Hopkins Hospital.

This report is not as complete in detail as I could wish, which is due to want of sufficient time to carry out a full series of systematic chemical analyses of the air in the wards. For the same reason the temperature of the water circulating through the heating coils has latterly been at times neglected, so that upon these points the observations can not be considered complete. In other respects I think the data presented will be of sufficient value to indicate the advantages of the system of ventilation and heating employed in this Hospital.

The system of heating is that known as a "hot water system" and consists of a network of iron pipes through which circulates hot water of comparatively low pressure and temperature. The heat is furnished by two sets of boilers—the one set comprising four in number located under the kitchen at the northern side of the buildings, the other consisting of two boilers of the same size located under the Nurses' Home at the south extremity of the system.

All the wards and the majority of the other buildings receive their heat from coils which are a part of this system.

The boilers, six in number, which supply the necessary heat are each five feet in diameter and sixteen feet long, and have 106 three-and-a-half inch tubes or flues. From these boilers the heated water passes out through the main delivery pipes which are of cast iron with an inside diameter of 26 inches. From these "mains" branches are given off to each building. These branches in turn give off smaller branches to supply the coils over which the air to be heated passes. From these coils the water which has been cooled in heating the air returns to the boilers by a second system of pipes exactly analogous to that just described except that it is located on a lower level. The circuit is, therefore, a closed one, none of the water being drawn off or used at any point.

To prevent loss of heat the entire system of mains and branches is insulated by a non-conducting medium composed of felt, asbestos and painted canvas. At the terminal branches, that is, the coils, this envelope is omitted so that the air comes in immediate contact with the surfaces of the heated iron pipes.

The force which sets the water in circulation is the difference in weight between the heated water which passes out from the boilers and the cooled water which leaves the coils on its return to the boilers. The two columns of water being of equal height, but of different temperatures, (the difference ordinarily being from 8°–15° F.) have, therefore, different specific gravities.

By means of valves upon the mains, the branches and the coils, the velocity of the flow and consequently the amount of heat required in any building, or at a given point in that building, may easily be regulated—indeed, by proper adjustment of these valves the amount of heat given off by one coil, that is, the amount of heat passing into one register in the ward may be made greater or less than that passing in through the neighboring register.

The entire system contains about 175,000 gallons of water and, as may be seen from the data given below, produces an equable agreeable temperature in all the buildings to which it is distributed under all conditions of cold weather and with the fullest ventilation.

The system of ventilation which is inseparable from the heating depends for its force, like the circulating water, upon the difference in specific gravity between equal volumes of air of different temperatures. Under each ward are 12 of the coils above referred to. Each coil is located in a brick flue, which conducts the air upward over the coil and into a register with a clear opening of one square foot located in the wall of the ward just above the floor and between the beds. At the bottom of each of these flues are two openings—one admitting air directly from outside—the other admitting air from the basement, or ventilating chamber as we prefer to call it, the whole room being intended for the purpose and used for nothing else.

The two openings are provided lest that in windy weather the air blowing directly against the outside wall-opening may give rise to draughts in the wards; whereas if this outside opening be closed and the air be admitted to the ventilating chamber (a basement which is all above ground) through windows, its direct force will be destroyed and it will be admitted through the inside opening of the flues and pass into the wards without draughts.

By this arrangement it is seen that the air delivered into the wards undergoes but a single alteration—an elevation of temperature—and differs from the outside air in this respect only.

After circulating in the wards it passes out through openings in the floor under each bed. These openings are all brought into communication, by means of flues, with a large common duct or trunk-flue which passes into the lower part of an aspirating chimney about 70 feet in height in the upper portion of which is located a steam coil. The temperature constantly maintained in this coil is such that there is at all times a strong upward draught in this shaft.

The wall registers, those delivering fresh air to the wards, are so constructed that they can never be shut off. The temperature of the air passing in through these registers may be regulated by means of a lever, the key to which is in the possession of the nurse in charge of the ward, so that

either the extremes of cold or warm air, or air of moderate temperature may be admitted as may be desirable, but at no time can the air be prevented from passing into the room.

Another device which exists in the common wards is the flushing-opening in the ceiling. In the ceiling of each ward are five openings each of 2 sq. ft. area controlled by a lever in the vestibule of the ward. The object of these openings is the liberation of over-heated air and experiment has shown that at such times as the heat is too great for comfort the temperature in the ward can easily be brought to a point of comfort in ten or fifteen minutes by opening these ventilators. Ordinarily these openings are kept closed.

The object aimed at in this system of ventilation and heating has been to supply to each individual occupying the ward at least one cubic foot of fresh air per second of such a temperature as to give rise at no time to feelings of discomfort; and from the data presented below it will be seen that this end has been gained. (See Table II).

I have not attempted a detailed description of the entire system employed. This has been fully done by Dr. Billings in his published description of the Hospital, to which I refer those desiring a more intimate acquaintance with plans, measurements, details of registers, etc. The above details are given for the better understanding of the tables.

As a result of the twelve months' observations upon the physical condition of the air in the common wards I have compiled the following table:

The observations upon the Relative Humidity and Dew point are taken at 8 a. m. and 8 p. m. The psychrometers employed being the same as those used by the United States Signal Service.

TABLE I.

Physical Condition of the Air in the Wards, from February 1st, 1890, to January 31st, 1891, inclusive.

		Tem.	R. H. Per Cent.	D. P.	Abs. Humidity. Grains per Cu. Ft.	Excess of Humidity in Air of Wards over that of Outer Air. Grains per Cu. Ft. of Air.	Max.	Min.
February, 1890.	Outside Air..	41.0°	76.	34.2°	2.280	—	—	—
	Ward D.....	67.7	40.2	42.4	3.065	0.785	—	—
	" E.....	69.2	38.1	41.5	3.010	0.735	—	—
	" F.....	69.7	38.8	42.8	3.178	0.898	—	—
	" G.....	70.1	37.1	42.0	3.065	0.785	—	—
	" H.....	70.1	38.1	43.0	3.178	0.898	—	—
March, 1890.	Outside Air..	39.5°	67.5	29.5°	1.957	—	—	—
	Ward D.....	66.5	43.0	43.5	3.234	1.277	—	—
	" E.....	66.0	48.5	46.0	3.539	1.582	—	—
	" F.....	72.0	38.0	44.5	3.355	1.398	—	—
	" G.....	68.0	38.5	41.0	2.955	0.998	—	—
	" H.....	69.0	39.0	41.0	2.955	0.998	—	—
April, 1890.	Outside Air..	53.4°	56.5	38.0°	2.646	—	—	—
	Ward D.....	69.9	52.0	51.5	4.223	1.577	—	—
	" E.....	68.5	57.5	53.0	4.527	1.881	—	—
	" F.....	69.4	58.0	54.0	4.686	2.040	—	—
	" G.....	73.6	54.0	55.5	4.934	2.288	—	—
	" H.....	71.9	51.0	52.5	4.450	1.784	—	—
May, 1890.	Outside Air..	63.9°	73.0	55.0°	—	—	—	—
	Ward D.....	69.5	68.5	58.0	—	—	—	—
	" E.....	69.8	68.0	58.5	—	—	—	—
	" F.....	71.2	69.5	60.0	—	—	—	—
	" G.....	71.8	63.5	58.5	—	—	—	—
	" H.....	71.3	71.0	61.0	—	—	—	—
June, 1890.	Outside Air..	74.7°	70	64 °	—	—	93°	59 °
	Ward D.....	76.2	66	64	—	—	88	64
	" E.....	74.4	74	65	—	—	88	68
	" F.....	76.7	69	66	—	—	89	65
	" G.....	77.1	65	64	—	—	91	68
	" H.....	77.2	67	65	—	—	90	69
July, 1890.	Outside Air..	74.2°	72	64 °	—	—	99°	62 °
	Ward D.....	76.4	68	65	—	—	90	62
	" E.....	77.2	67	65	—	—	93	66
	" F.....	76.9	65	64	—	—	94	64
	" G.....	76.5	67	65	—	—	95	63
	" H.....	77.9	63	65	—	—	94	66
August, 1890.	Outside Air..	72.3°	79.0	65.5°	—	—	95°	59 °
	Ward D.....	74	70.0	65.5	—	—	88	64
	" E.....	74.7	74.5	66.5	—	—	89	65
	" F.....	74.8	71.5	65.0	—	—	90	64
	" G.....	74.5	71.0	64.5	—	—	90	65
	" H.....	74.7	71.5	65.0	—	—	88	63
September, 1890.	Outside Air..	66.3°	80.5	59.5°	—	—	87°	48 °
	Ward D.....	70.3	81.5	64.5	—	—	81	62.5
	" E.....	70.6	74.5	62.0	—	—	83	62.5
	" F.....	70.9	75.0	62.5	—	—	82	61.0
	" G.....	70.8	75.0	62.5	—	—	83	61.0
	" H.....	70.9	77.0	63.5	—	—	—	—
October, 1890.	Outside Air..	54.8°	76	48 °	3.801	—	—	—
	Ward D.....	69.1	55	52	4.373	0.572	—	—
	" E.....	68.7	57	53	4.527	0.726	—	—
	" F.....	68.8	55	52	4.373	0.572	—	—
	" G.....	68.6	55	52	4.373	0.572	—	—
	" H.....	69.2	55	52	4.373	0.572	—	—
November, 1890.	Outside Air..	45.5°	68	36 °	2.457	—	—	—
	Ward D.....	68.6	35	41	2.955	0.498	—	—
	" E.....	68.7	35	41	2.955	0.498	—	—
	" F.....	69.4	33	39	2.746	0.289	—	—
	" G.....	69.3	33	39	2.746	0.289	—	—
	" H.....	69.4	35	40	2.849	0.392	—	—
December, 1890.	Outside Air..	30.8°	71	25 °	1.611	—	—	—
	Ward D.....	68.8	25	33	2.195	0.584	—	—
	" E.....	69.5	32	38	2.646	1.035	—	—
	" F.....	70.2	27	35	2.367	0.756	—	—
	" G.....	70.7	23	31	2.034	0.423	—	—
	" H.....	70.2	26	33	2.195	0.584	—	—
January, 1891.	Outside Air..	35.2°	72	27 °	1.743	—	—	—
	Ward D.....	69.6	26	33	2.195	0.452	—	—
	" E.....	69.1	24	31	2.034	0.291	—	—
	" F.....	71.9	24	33	2.195	0.452	—	—
	" G.....	71.9	24	33	2.195	0.452	—	—
	" H.....	71.8	24	33	2.195	0.452	—	—

Abbreviations.—Temp. = Temperature of the Air; R. H. = Relative Humidity; D. P. = Dew Point; Max. = Maximum Temperature recorded during the month; Min. = Minimum Temperature recorded during the month.

The temperatures in the wards are taken by the nurses at every hour, day and night and recorded upon temperature cards especially designed for the purpose. The observations upon the outside air are made in accordance with the directions given by the United States Signal Service.

I wish to express my obligations to the Superintendent of Nurses and her corps of assistants for their hearty coöperation and valuable assistance in these studies.

The improvements in the methods of working this system due to increased experience may perhaps be best observed by a perusal of the recorded dew points of the air in the wards as compared with that of the outside air. For February, March and April, 1890, the difference throughout is much greater than during the present winter months—of course for the summer months when all windows are open, the two dew points are practically alike.

In the papers of De Chaumont it is pointed out that the relative condition of humidity of the air in buildings may, in lieu of a careful chemical analysis, be taken as an index of the existing rate of ventilation. Viewing our observations in the light of his calculations it would appear probable that the amount of air passing into our wards is very much less than that actually found by experiment to be the case. From the observations at the registers and a few scattered chemical analyses, we find that there is not only the desired amount of fresh air supplied to each bed in the ward but that the admissible limit of respiration-impurity as expressed by the carbonic acid analysis falls within the proper bounds. This, in addition to an entire absence of organic impurity as detectable by the senses, strengthens the belief that the condition of humidity of the air can not under all conditions be considered as a reliable index of the chemical condition of the air in the wards. Especially would this be the case where, for the removal of dust, the moistened mop is substituted for the dusting brush.

Modern bacteriological investigations have pointed out the unhygienic nature of the dry methods of cleaning rooms; we have therefore discarded it entirely and have substituted throughout, the moist cloth. Under no conditions is dry dusting permitted. This alone may suffice to account for a fair proportion of the excess of humidity found in the air of the wards.

During the coming year I hope to have observations made which will bear directly upon this point. It can be determined only after a series of parallel observations upon the respiration-impurities as expressed by the carbonic acid analysis, the determination of the actual amount of air entering the wards and the daily variations in the humidity of the air in the wards as compared with the outside air.

In Table II are presented the observations upon the ventilation of the wards. These figures are the results of morning and evening estimates of the amount of air entering each register in the ward. These records are made daily and at the end of each month a mean of the whole number of observations is made.

From this table it will be seen that during those months in which the occupants of the ward are in the main dependent upon the registers for their fresh air supply, each individual receives at least one cubic foot of fresh air per second and usually a little more.

During the warmer months—from April to October—the amount naturally falls off because at that time the temperature of the outer air is sufficiently high to permit of windows being opened, when the patients live practically in the open.

TABLE II.

Showing the average amount of fresh air delivered per second through the registers to each bed in the ward. Expressed as cubic feet.

	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Ward D...	1.2	1.4	1.3	0.8	0.7	0.4	0.4	0.5	1.2	1.0	1.0	1.1
" E...	1.4	1.4	1.2	0.8	0.7	0.5	0.5	0.6	1.1	0.9	1.0	1.1
" F...	1.3	1.3	1.3	0.9	0.8	0.5	0.4	0.6	1.1	1.0	0.9+	1.1
" G...	1.3	1.4	1.3	1.0	0.8	0.4	0.5	0.7	1.2	1.0	1.0	1.0
" H...	1.5	1.4	1.7	0.9	0.8	0.5	0.5	0.7	1.1	0.9	1.0	1.1

An instructive and interesting feature in the study of this system are the comparative results obtained as our acquaintance with the proper manipulation of the apparatus becomes more and more intimate.

For example: Taking January as an average winter month, we find by comparison, for 1890 and 1891, the following conditions.

	Mean Outside Temp.	Mean Temperature of Wards.	Mean Temp. of Water in Flow Pipes.	Mean Temp. of Water in Return Pipes.	Mean Loss of Heat in ○ F.	Monthly Average of Coal Consumed.
Jan., 1890....	44° F.	70° F.	143.3°	131.4°	11.9°	121.6 tons.
Jan., 1891....	35.2° F.	70.8°	128.5°	117.5°	11.0°	99.7 "

Owing to the record of coal consumed during the winter of 1889 and 1890 having been kept in the aggregate and not by months, I am obliged to give the monthly consumption as an average of eight months. This includes the mild weather of September, October and April, so that the figures given above as the average monthly consumption in January, 1890, are lower than they would have been, had I been enabled to calculate the results in the same way as I have done for the past five months of the present winter. The comparisons would, of course, have been of more value and accuracy had I been in a position to present the actual amount of fuel burned in this month for the two years but, as stated, the records for January, 1890, were not kept, so that we must content ourselves with the averages given above. Without being exact they serve, however, to indicate improvements in the management of the heating apparatus.

We have given the system a fair trial under all conditions of weather and the results have in the main been of a most satisfactory nature. Many little errors of manipulation are still constantly arising, but as I have endeavored to point out in the comparative operations in January, 1890 and 1891, we are becoming more and more familiar with them, and from those comparisons it is plain that we may ultimately attain even better results.

NEEDS OF THE HOSPITAL.

To fully carry out the plans of the Hospital several additions are required which may be briefly mentioned.

1. *Ward for Colored Patients.*

At present our colored patients are accommodated in the smaller wards upon the Monument Street side of each of the pavilions. In order to accommodate as many as possible it has been necessary to utilize the ward dining rooms and to convert the passage way into two dining rooms, separated by a low partition. This arrangement has proven an inconvenient one and the necessity of better dining room accommodation is daily apparent. The arrangement also deprives patients in the general ward of the use of the small wards, which are frequently in great demand for patients who are very ill or who require seclusion from the stir and excitement inevitable in a large hospital ward. For this reason it seems most important that a ward be constructed for the special use of colored patients. This could be placed in a position upon the south side of the grounds corresponding with the present octagon ward and should be of the same general plan with the lower floor arranged for men and the upper floor for women.

2. *Gynecological Operating Room.*

The present gynecological operating room which is in the centre of the private ward proves to be unfortunately located and not well adapted to the purpose for which it was built. It is most desirable that an operating amphitheatre be built for gynecological cases mid-way between the two gynecological wards and arranged so as to give convenient access to them for operations.

3. *Ambulance Service.*

An ambulance service is desirable and would serve a most useful purpose. There is at present no ambulance system in Baltimore and accident cases and cases of severe disease are forced to rely upon the police patrol wagon which does not furnish any adequate shelter from the sun or storm or good facilities for the transportation of the sick and wounded. The excellent ambulance service which exists in New York should be adopted in this city. Many applications are made for the services of such a vehicle and it is to be regretted that the Hospital does not possess one.

4. *District Nursing Among the Poor.*

I desire to call attention once more to the desirability of inaugurating a system of district nursing among the poor of Baltimore, especially among those who live in the district immediately surrounding the Hospital. The need of district nursing among the poor as an adjunct to the work of the Dispensary is daily apparent. Self-respecting aged people who may have outlived relatives and children, and who may not need the constant care of a hospital but who do need regular systematic visits from an experienced nurse are frequently found. Women who are mothers of families and who cannot be spared from home even in the perils and trials of maternity should have nursing in such emergencies. Many cases of life-long ill-health among poor women date from a lack of nursing and care at such times. Inexperienced mothers need to be taught how to nurse and care for sick children. In these and a hundred other ways the work of the district nurse would lighten the heavy burden of poverty and preventable disease.

5. *Children's Ward.*

The growing necessity of a ward arranged especially for children is also apparent. At present sick children under

ten years of age are cared for in connection with the women's ward under circumstances of some hardship to its legitimate occupants by reason of the crying of sick children. Contrary to what was originally supposed when the Hospital was opened, the number of children suffering from sickness or needing surgical treatment is large. Many of the latter have been received because of the need of prompt surgical attention in early life to prevent deformities or life-long disease and disability. Baltimore unfortunately has but a single child's hospital and its accommodations are more than taxed by the demands made upon it. If a ward could be set apart for children at this Hospital there is every reason to think that the beds would be constantly filled.

Acknowledgments.

Acknowledgments are due to the following named persons who contributed money or supplies to the Christmas Fund for 1890:—

Dr. Kelly,	Miss Jack,	Mr. Emory,
" Welch,	" Hall,	" White,
" Robb,	" Barnard,	Mr. Dixon,
" Baltzell,	" Cleaver,	Mrs. Dixon,
" Roose,	" Laing,	" Remsen,
" Phippin,	" Toulmin,	Miss Gordon,
Mrs. Irving,	Dr. Latimer,	" Garrett,
Miss Dock,	" Williams,	and others.

Also to Mr. Dawson, of Montreal, Canada, who sent beautiful cut-flowers for two wards, on Christmas Day.

Thanks are also due to the Rev. O. E. Herrick for conducting religious services in the Amphitheatre; to the Rev. Mr. Harding and other clergymen for frequent visits and prompt attention to sick calls; to the Rev. Father Dausch for regular visits and attendance upon the sick; to Miss Myers and others for weekly visits to the convalescent patients, for reading and other services; to Mrs. Briscoe and Miss Briscoe for many acts of kindness to sick patients; to President and Mrs. Gilman for pictures to the Nurses' Home; to Miss Garrett for a supply of books to the library at the Nurses' Home and frequent presents of cut flowers to the wards; to the Hospital Aid Society for a concert given for patients in the Amphitheatre; to the Flower Mission for bouquets of flowers on several occasions for the wards; to Miss Morrison and others for donations of picture papers. To all these, the grateful acknowledgments of the officers and patients of the Hospital are due.

The results attained during the past year give much encouragement for the future. The organization of each department of the Hospital has been perfected, and every branch of its work has been prosperous.

Each month demonstrates the value and necessity of the work of the Training School for Nurses. The School is developing a new field of usefulness for the young women of Baltimore and Maryland, and is growing in popular favor. The dignity and importance of the profession of nursing were never so well appreciated in this community as now. The Dispensary has also proven of great value to the sick poor, and the thorough and conscientious work which has been done there, has been highly appreciated. When the work of the Dispensary can be supplemented by district nursing among the poor, a great advance will have been made in the relief of disease among a class of patients which has hitherto been passed by. Our laboratory courses and medical instruction have brought to the Hospital a company of earnest workers and ardent students who, in the future, will do much to advance the study of medicine in all its branches. Our medical, surgical and gynecological wards and clinics, and our surgical and gynecological operating rooms and apartments have served as models for the work of other hospitals. Our publications, no less, have done much to bring the work of the Hospital to the notice of the medical profession both in this country and Europe. In the short space of nineteen months the Trustees and officers have the satisfaction of seeing the Hospital occupy an acknowledged position in the medical work of the country as a growing centre of instruction and usefulness. The outlook for the future is most encouraging.

Very respectfully submitted,

Henry M. Hurd,
Superintendent.

Baltimore, *February* 10th, 1891.

THE JOHNS HOPKINS HOSPITAL REPORTS.

The second volume of the Hospital Reports began in January, 1890. They will contain pathological, medical, surgical and gynecological papers and reports, details of cases, the technique of operations, etc. Subscriptions will be received for the volume, of about 500 pages, at $5. The price of the separate fasciculi will vary with their size and the number of plates they contain. The contents of the latest numbers of this volume are as follows:

No. 5.—Price, 50 Cents.—Contents.

Report in Surgery, I. By William S. Halsted, M. D. The Treatment of Wounds, with especial reference to the Value of the Blood Clot in the Management of Dead Spaces.

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COELIOTOMY FOR MYOMA OF THE UTERUS. HYSTEROMYOMECTOMY. INFECTION BY BACTERIUM COLI COMMUNE.

By HUNTER ROBB, M. D., *Resident Gynecologist, and* ALBERT A. GHRISKEY, M. D., *Assistant Gynecologist to the Johns Hopkins Hospital.*

On the 7th of May last, S. J., colored, 34 years old, and single, entered the gynecological ward of the Johns Hopkins Hospital, in the service of Dr. H. A. Kelly.

On admission the following observations were recorded: Patient well nourished, somewhat anaemic. Date of the last menstrual period, April 12th. Menstrual flow regular, moderate in amount; no history of hemorrhages. She has had leucorrhoeal discharges for the past two years, most marked immediately following the menstrual period. For the past year has complained of painful micturition and "bearing-down" pain in the lower zone of the abdomen; also complains of a stinging, burning pain in the left ovarian region, and across the small of the back; this is increased on exertion.

Examination per vaginam reveals a nodular myomatous uterus about the size of an adult's head, extending from the pelvis to above the umbilicus. Temperature and pulse normal. Urine clear with a faint trace of albumen and some doubtful casts.

Operation May 9th, under chloroform narcosis. Hysteromyomectomy performed by Dr. Kelly's method.

An incision 6 cm. long was made in the median line, through the moderately thick abdominal walls. The tumor mass was exposed and delivered through the lengthened incision. After tying off the broad ligaments on either side, and down to the base of the mass, a rubber ligature was thrown around the uterine pedicle below.

The mass was developed so low in the uterus that it would have been impossible to elevate it sufficiently to treat this case extraperitoneally with clamp or ligature. The mass above the provisional rubber ligature being cut away, and the portions of the remaining pedicle being trimmed so as to allow the approximation of the opposite faces, the cervical canal was cauterized, and the raw face of the pedicle was obliterated by buried interrupted catgut sutures. The peritoneal surfaces were approximated by silkworm gut, and the pedicle suspended in the lower angle of the wound. A drainage tube was put in above the pedicle; there was no hemorrhage.

The first dressing of the tube was made the next day, May 10th, 24 hours after the operation. Notes made were: "Cotton over the tube slightly moistened, the plug in the tube thoroughly saturated with dark clotted blood. Six pledgets of cotton used in cleaning the tube, the last scarcely moistened. The tube was therefore removed."

Cultures were made and a cover-slip preparation studied. The following day the culture tubes showed profuse growths resembling staphylococcus pyogenes albus. The temperature by the mouth on the day after operation was 101.2° F.; by the rectum, 102.3° F. The temperature after the removal of the tube on the day after operation went up in the evening to 102.6° F. by the rectum; 101.5° F. by the mouth. The pulse became rapid, and at eleven o'clock the same evening it was between 140 and 150, although the temperature declined, going down to 99.4° F. by the mouth, and 101.4° F. by the rectum.

Stimulants were given hypodermically, and an attempt made to open the bowels by enemas, and also by salts administered by the mouth. Two or three sutures in the lower angle of the wound near the track of the drainage tube were cut and removed, as the abdomen at this time was found to be distended and hard. After opening the peritoneal cavity, and making some slight pressure, several drachms of a bloody brick-colored fluid exuded. Upon inserting the finger through the incision several bands of adhesions were felt on the left side between the intestines and pedicle. These were easily separated. The intestines were noted to be much distended. At no other place could any adhesions be discovered. A drainage tube was again inserted and the usual dressings applied. This operation was performed without anaesthesia.

The pulse immediately after this increased somewhat in strength, but hourly records showed it to be fluctuating and irregular, going as high as 156. She then began to have some nausea, which increased so much that it was impossible to administer anything by the mouth. When the tube was inserted, 10 per cent. iodoform gauze was used in the tube instead of the ordinary sterilized gauze.

The tube was dressed again the next day, at 3.35 p. m., 27½ hours after the first dressing, or 51½ hours after the operation. The cotton over the tube was scarcely moistened; the plug in the tube was moist and discolored with blood. Five pledgets of cotton were used to clean the tube. The usual cultures were made. The condition of the patient at this time seemed somewhat better; the abdomen not so distended, and the nausea diminished; but the pulse was still quick, 150. The temperature on this day fluctuated considerably; the mouth temperature was as low as 98.8°, and at the same time the rectal temperature was 102.6°. The usual stimulants were continued, and rectal enemas used to induce the bowels to move. She also complained this day of considerable pain in the lower portion of the abdomen, and also of some pain in the epigastric region. After the bowels were slightly moved, this was very much diminished. The vomiting increased in amount, and occurred at more frequent intervals.

The next day the tube was dressed at 3.40 p. m., 24 hours after the second dressing. The usual cultures were made. Cultures from the first dressing now showed better, and numerous *colon bacilli* were recognised, and not staphylococcus pyogenes albus, as at first surmised. The notes taken at this time were: "Dressing over tube dry, plug in lower portion of tube wet with slightly colored bloody fluid. Tube cleaned with four pledgets of cotton; tube raised and turned. Abdomen much distended. Great tendency to stupor, nausea not so frequent, but there were one or two bad attacks." Pulse to-day full, regular and quick. Usual stimulants given hypodermically and by mouth, as she could retain them. The temperature on this day, by the mouth, 98.5° in the morning, to 103.3° at 3.55 a. m.; and by the rectum, the temperature in the morning was 104.6°, and at 3.55 a. m. was 104.3°, at which time she died in collapse on the 4th day.

Autopsy of case made five hours after death.

The following notes were recorded at the autopsy performed in the Pathological Laboratory. The autopsy is necessarily imperfect, owing to the conditions under which it was made.

Anatomical Diagnosis. Diphtheritic enteritis. Oedema of the lungs. Peritonitis. Operation wound of abdominal walls. Hysterectomy. The small intestines are enormously distended and the pelvis contains adherent loops of the ileum. There is some bloody fluid between the intestinal folds. There are slight adhesions between the intestines in the upper part of the abdomen. In the posterior part of the abdominal cavity there is some bloody exudation. At the point of contact, the intestines are covered with a small amount of fibrin. The peritoneal surface is in places intensely injected and there are some small ecchymoses. In the pelvis there is a small amount of bloody fluid. Portions of the tubes, the ovaries and a large part of the uterus have been removed. In the stump of the uterus these is a large blood clot. The ends of the tubes are sloughy and bloody. The intestines are adherent to these structures.

The lungs are oedematous, the heart is soft and flabby. The liver is soft and of a pale brown color, and the gall bladder is distended with thin, watery bile. The kidneys are pale. In the lower portion of the ileum there is an area of intense congestion. At this point there is some superficial necrosis of the mucous membrane, confined to the edges of the valvulae conniventes. The large intestines and the rectum are normal.

Cultures made from the liver, spleen and kidneys gave bacilli —apparently colon bacilli. The cultures taken from the peritoneal cavity all gave negative results.

This case is of peculiar interest on account of the presence of the *bacterium coli commune* in the peritoneal cavity. It was found in all the dressings of the drainage tube, and also in the liver, kidney, spleen and bile at the autopsy. That these organisms were the colon bacilli was shown not only from their morphology but from their characteristic growth in cultures. Diphtheritic enteritis occurring as a complication of the condition, is also of much interest.

We are not able to decide positively that this diphtheritic enteritis was not due to douches of bichloride of mercury, one being given on the morning of the operation, and one immediately previous to the operation. About a half-litre of a one to one-thousand watery solution of corrosive sublimate was used each time, and simply allowed to discharge itself. The enteritis which existed resembled very closely that produced by corrosive sublimate.

We have desired especially to emphasise the discovery of the *bacterium coli commune* in the peritoneal cavity in pure culture, with extensive enteritis, without marked peritonitis.

A CASE OF ACROMEGALY IN A NEGRESS.

By Henry J. Berkley, M. D.

(Read at the Meeting of the Hospital Medical Society, Monday, May 18, 1891.)

The observation which I present this evening is the forty-fifth case of the disease that has been reported in the current literature, the seventh in the United States,[1] and the first among the negro race.

While the enlargement of the extremities has not advanced to the degree reported in a few observations, the case in other ways is quite as characteristic as any of those hitherto recorded, and shows that the black race can no longer be considered immune from this rare affection.

Mary Mack, aged 60, colored, was admitted to the City Insane Asylum in May, 1888, for delusions of persecution.

The family history is negative, so far as can be obtained, of neurotic diseases. Both father and mother died of unknown causes. One brother and a sister are living, and have no mental trouble.

The patient's past history has been uneventful: she has usually enjoyed good health, and followed her occupation of a cook until a few years ago. She was married at an early age, and had six living children and a miscarriage as the fruits of the marriage. Five of these children died between the ages of six and ten months, the other is living, and reported as being in good health Some fifteen or twenty years ago, the patient had two attacks of articular rheumatism, which did not, however, permanently disable the joints.

Present state, March, 1891.—The patient has been under my notice since October, 1890, at which time she attracted attention, apart from the mental symptoms, by the large size of the hands and feet, the peculiar thick and drooping appearance of the lower lip and the humped-back attitude with which she carried herself. On inquiry it was found that two years before, one of the resident physicians had noticed the enlargement of the extremities, but had made no examination, but he did not think the enlargement, especially of the hands, had increased very much since that date. Between October and March, the date of the present examination, there has been no change in her general condition, except the occurrence of some trophic lesions about the arms and hands.

The patient is a rather undersized negress, with a slight admixture of white blood in her veins, 1445 mm. in height, rather heavily built for her stature, though the panniculus on the trunk and extremities is but slightly developed. There is nothing especial to be noted about the respiratory, circulatory, or digestive functions, except that she constantly complains of not having enough to eat, though allowed more than many of the other patients. There seems, though, to be no increase in the amount of liquids taken. The urine is high-colored, deposits a cloud of phosphates, but contains no albumen or sugar.

Of the special senses: Eyesight is reasonably acute, with the color sense well preserved. The pupils react to light and accommodate perfectly. [No opthalmoscopic examination.] Hearing is very much dulled. Gustatory sensation is perfect. Tactile sensation all over the body seems to be a little below the normal; heat, cold, and pain are readily distinguished. The cutaneous secretion is increased, and very foul smelling. The glandular secretions are natural.

The muscular sense is well preserved, and there is no loss of equilibrium on standing with the eyes closed. The deep reflexes are somewhat exaggerated, the cutaneous are normal.

1 Dr. Charles Long, of Wilkesbarre, in the *Lehigh Valley Medical Magazine* for April, 1891, gives references to all the reported cases, the sixth being his own. It is interesting that only three of the six cases have been in native-born Americans.

The skin over the face, trunk, and legs, is comparatively well nourished; on the arms and hands, especially the right, there are numbers of old scars, the cicatrices of which are attached to the deeper tissues, and between the first joints of the fingers are large blebs which heal very slowly, and upon the tip of the little finger a subcutaneous ecchymosis, which has been present a number of weeks. There is about the hands and feet a great deal of fine wrinkling. At the right elbow is a large ulcer resulting from a bruise, which has assumed a perforating character, penetrating down to the ligaments of the joint. There is nowhere any appearance of a myxoedematous condition. The hair is thick and coarse all over the body, and on the legs has a distinctly flattened appearance.

The patient is suspicious, at times very refractory, but always very talkative. Her delusions are of persecution solely—Geo. Lloyd, and Walker, two imaginary beings, are constantly after her, taking out her heart and eyes, and shooting her with shotguns; as evidence of the same persecution she shows the marks of bruises received by striking the extremities against the bed and door of her cell, when she is restless and excited at night.

Cephalic extremity.—The skull is dolichocephalic, rather small but regular: the bones are not increased in size. The ears are well formed and are not thickened. The orbital arches are prominent for a negro, while the eyebrows are peculiarly curved, and there are large quantities of pigment deposited about the eyelids. The nose is uniformly thickened, broad, but not prominent, the increase in size being equally due to the enlargement of the osseous and soft tissues. The malar bones are prominent, and the tissue over them is hypertrophied. Both lips are thick, but the lower one projects considerably outward, beyond the upper, and is also somewhat pendulous, giving the face a prognathous aspect. The upper teeth are in part lost, the lower are well preserved, and are slightly separated from each other. The tongue is not markedly increased in length, but seems thickened. The voice is high-pitched, disagreeable, though articulation does not seem to be impeded. A marked enlargement of the inferior maxilla is not present, though it is apparently increased in vertical measurement. The face, while much more oval than the average negro, does not present that extreme elongation apparent in the majority of the cases described, race characteristics doubtless here play an important part.

The neck appears to be normal, in size. There is a marked dilatation of the veins, but this is even more apparent about the forehead, and especially over the upper part of the thorax and arms, where the vessels are markedly varicose. The thyroid gland cannot be certainly felt, and if altered at all, is somewhat atrophic. The larynx is quite prominent. The head and neck are carried so as to rest habitually upon the breast, when the patient is sitting.

Trunk.—The right shoulder is held much higher than its fellow; the scapulae are not notably altered; the clavicles seem broadened at their sternal extremity; the supraclavicular fossae are very deep; the manubrium is prominent, apparently enlarged, the gladiolus not so much so; the ensiform cartilage is very prominent and hypertrophied, projects downward much below its usual limit, and makes an appreciable projection under the skin. There is a well-marked retro-sternal dullness over the whole of the manubrial region; the heart dullness does not appear to be unusually great, and the percussion notes over the lungs are clear.

On the posterior aspect of the thorax, the pronounced scoliosis of the vertebral column is very striking, extending in wide S-shape from the seventh cervical vertebra to the second lumbar. The first curve is toward the right, then crossing the median line in the mid-dorsal region it curves toward the left widely, and then returns. A pronounced kyphosis is not apparent. The deformity resulting from the curvature is well marked, while the ribs themselves apparently are broader than is usual. The lower part of the thorax projects outwards.

There is nothing especially noticeable about the abdomen besides the general varicosity and enlargement of the veins. The general development of the muscles of the thorax and abdomen is normal. Measurements of the pelvis were not satisfactory, the patient resisting attempts to make them.

Superior extremities.—The arms and fore-arms do not show any disproportion to the general development; the hands are out of proportion to the size of the arms; there is some difference in the muscular development of the right and left arms, probably owing to a dislocation forward of the head of the right humerus. The length of time this dislocation has been present is a matter of some doubt; it did not exist a year ago when the shoulder had to be dressed daily for an ulcer, the result of a bruise, which, like the more recent one, assumed a perforating character and penetrated to the bone of the acromion process. In the October past she could not, however, raise the hand to the head; but even at that time there was no complaint of pain, and it is evident that the injury has caused her little discomfort, for up to a few weeks ago she used the fore-arm quite freely, and only since the other injury to the elbow has she discontinued its use. There is now considerable crepitation on rotating the head of the bone in its socket. At the extreme outer edge of the acromion process of the scapula, is a large scar, which is firmly attached to the deeper tissues, the result of the injury mentioned above. Over both arms there are other small scars; also on the fingers, the small scars, blebs, and ecchymosis, before mentioned. The left arm and hand has a smaller number of scars and trophic lesions on it than the right. Owing to the dislocation, the head of the right humerus can be projected outward from the socket, and appears much enlarged; that on the left side cannot be so definitely determined, but also appears large.

On the right side, the posterior part of the deltoid is a little atrophied, probably from partial disuse; the other muscles do not appear to be involved in the atrophy. On the left side, there is no enlargement of the tissues, though the biceps stands out a little prominently, possibly from having to do the work of its fellow. In the fore-arms there are no changes to note. There seems to be some increase of the fleshy parts of the wrist, but none in the bony.

The hands, compared in size with the fore-arms, are enormous; they are rather broad than long; the fingers thick; the nails broad and short, but not ridged; the skin over the whole hand wrinkled and creased. The soft tissues of the meta-carpus are much hypertrophied; those of the phalanges, more so. The thenar and hypo-thenar eminences, are large and flabby. There is some difference in the development of the adductor pollicis in favor of the right hand. The interossei are firm. The joints of the phalanges are considerably enlarged, those of the first especially.

Inferior extremities.—There is nothing noticeable about the development of the thighs. The patella is apparently increased

in all of its dimensions, otherwise the knee-joint does not appear involved.

The leg likewise shows nothing to remark in the bony parts; while the calf-muscles stand out prominently, and are very firm, those on the left side quite markedly, and the achilles tendons are broad and thick. The legs are covered with very broad, flat hairs.

Besides the disproportion of the feet to the legs there is little to remark about them; the bones of the tarsus, the first joints of the phalanges are especially hypertrophied, and there is much wrinkling of the skin about the articulations; particularly on the dorsum of the foot. The soft parts about the heel and outer margin of the foot are quite thick; the natural plantar and palmar lines are deeply marked, and bordered by folds of the cuticle; the nails of the toes, like those of the fingers, are broad and short; and are also ridged.

The mental condition of the patient does not allow of a correct estimate to be formed of the amount of neuralgic, or other pain, that may be present. It is quite an open question whether the pricking of the sea-nettles, or the fine shot from the guns of Lloyd and Walker, form solely a part of the mental alienation, or are to be included among the symptoms due to the changes in the tissues of the entire body.

There is also at times an inconstant headache complained of, though it is never severe.

MEASUREMENTS.

	mm.
Cephalic Extremity.—	
Length from top of forehead to tip of chin [with callipers]	200
Extreme width of face [with callipers]	128
From meatus of ear to edge of nasal orifice; right, 120; left,	125
From meatus of ear to centre of nasal bones between the eyes, each side	140
Breadth of nasal bones between canthii [with tape]	34
Breadth of nose over bridge	42
Greatest width of alae nasi [callipers]	45
Extreme width of mouth	65
Breadth of face over nose [tape]	160
Length of inf. maxilla over symphysis [tape]	275
Thickness of tongue at edge of lip [callipers]	20
Length of each ear	56
The circumference of the neck at hyoid bone is	310
Trunk.—	
Circumference of thorax over nipple, 758 mm.; right, 375; left,	385
The length of each clavicle is	160
Their breadth near the sternum is	35
The length of the left arm is	285
The circumference at middle of biceps is.....right, 215; left,	205
The length of each radius is	260
The greatest circumference of the fore-arm is	260
Circumference of the wrist immediately below the extremity of the radius and ulna	161
Length of the hand from carpal-metacarpal articulation to the end of the middle finger	182
Circumference of metacarpus over thumb, right	190
Circumference of the hand, without the thumb, at the head of the metacarpal bones.....right, 195; left,	180
Length of middle finger, dorsal aspect, right	114
Length of ring finger, dorsal aspect.....right, 104; left,	103
Circumference of thumb, first phalanx	75
Circumference of index finger, first phalanx	74
Circumference of middle finger, third phalanx, right, 55; left,	50
Greatest thickness of hand [callipers]	45
Length of nail of middle finger	13
Breadth of nail of middle finger	15
Length of nail of thumb	16
Breadth of nail of thumb	18
Inferior Extremities.—	
Length of thigh	360
Circumference of thigh	395
Vertical diameter of the patella	70
Transverse	58
Length of leg	392
Circumference over knee	330
Circumference of middle of calf.....right, 300; left,	320
Circumference immediately above the internal malleolus	200
Greatest circumference of foot	245
Greatest width of foot	107
Length of plantar surface of foot	235
Length of great toe, dorsal aspect	78
Length of second toe	55
Length of nail of great toe	18
Breadth of nail of great toe	22

Marked differences between the two sides are noted.

From the point of view of a differential diagnosis, myxoedema must be excluded by the absence of all deposits of mucin, and the elongated form of the face; rachitis, and osteitis deformans, by the absence of deformity of the diaphysis of the long bones; Marie's osteo-arthropathie-pneumique, by the absence of pulmonary trouble, and the different aspect and measurements of the fingers.

Bearing in mind the recent cases of Holschewnikoff[1] and Charcot,[2] in connection with the recurrent trophic lesions of the skin of the arms and hands, a differential diagnosis from an obscure form of syringomyelia is not with certainty to be made, though truly there was no loss of the thermal and pain sensations on either side of the body. But at the same time, these lesions may with equal ground be considered as due to some form of angioneurosis, or even an irritative lesion of the posterior roots of the spinal cord, the first named being to me the more plausible. The pronounced lateral curvature is rather rare in acromegaly, though more common in syringomyelia.

The time of the commencement of the hypertrophy of the extremities is entirely uncertain, no definite history being obtainable; most probably it began after the menopause, like a few reported cases.

It is to be regretted that better photographs could not be obtained, but both the measurements and photographs were obtained under difficulties, the patient, like most cases of paranoia, being very refractory.

BALTIMORE, *April*, 1891.

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1 Holschewnikoff. Virchow's Arch., Bd. 119, 1890.
2 Charcot. Progr. Med., 1891, Jan., No. 4.

The Johns Hopkins Hospital Bulletins are issued monthly. They are printed by Messrs. JOHN MURPHY & CO., Baltimore, from whom single copies may be obtained; they may also be procured from Messrs. CUSHING & CO. and the BALTIMORE NEWS COMPANY. Subscriptions, $1.00 a year, may be addressed to THE JOHNS HOPKINS PRESS, BALTIMORE; *single copies will be sent by mail for fifteen cents each.*